

**Claims:**

1. A method for manufacturing natural dyes using beer sludge, comprising the steps of:

a step for drying beer sludge;

5 a step for mixing the dried beer sludge with a certain extraction solvent selected from the group comprising water, electrolysis reduction water, and electrolysis oxidation water, and extracting a coloring component; and

a step for filtering an extraction liquid.

10 2. The method of claim 1, wherein said extraction step has an extraction condition that the extraction is performed at a water ratio of 1:5 through 10 at a temperature of 90 through 100°C for 2 through 3 hours.

3. The method of claim 1, after said filtering step, further comprising a step  
15 for drying the filtered liquid and then obtaining powder component.

4. The method of claim 3, wherein said drying step is achieved based on a freeze and drying process.

20 5. A natural dye fabricated based on the method cited in one claim among

claim 4.

6. A method for dyeing fiber product using a natural dye using beer sludge, comprising the steps of:

5 a step for adjusting pH of a natural dye fabricated based on the method of claim 1; and

a step for dipping a fiber product into a pH-adjusted natural dye and performing a dyeing process.

10 7. The method of claim 6, wherein pH of the natural dye is adjusted to 3 through 9 using nitric acid and sodium hydroxide, and said fiber product is one selected from the group comprising silk fabric, cotton fabric, nylon fabric and woven cotton/nylon, and the condition of said dyeing process is a water ration of 1:40 through 60 at 80 through 100°C for 60 minutes.

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8. The method of claim 6, before the dyeing process, further comprising a step for performing a mordanting process.

9. The method of claim 6, after the dyeing process, further comprising a  
20 step for performing a mordanting process.

10. The method of claim 6, wherein said dyeing step and said mordanting step are concurrently performed.

5 11. The method of claims 10, wherein said mordanting step is performed using a mordant selected from the group comprising  $K_2Cr_2O_7$ ,  $KAl(SO_4)_2 \cdot 12H_2O$ ,  $Al_2(SO_4)_3$ ,  $CuSO_4$ ,  $FeSO_4 \cdot 7H_2O$ , and  $SnCl_2 \cdot 2H_2O$ , and the adding amount of mordant is 3 through 10% o.w.t., and said mordanting step is performed at a water amount of 1:40 through 60 at a temperature of 80 through 100°C for 60  
10 minutes.

12. A fiber product dyed by a method selected from the methods cited in claim 10.